

Title (en)  
MESSAGING APPLICATION LAYER (MODBUS) OVER ETHERNET TO TRANSPORT LAYER (TCP), COMMUNICATIONS METHOD AND APPARATUS

Title (de)  
NACHRICHTENANWENDUNGSSCHICHT (MODBUS) ÜBER ETHERNET ZUR TRANSPORTSCHICHT (TCP), KOMMUNIKATIONSVERFAHREN UND VORRICHTUNG

Title (fr)  
COUCHE D'APPLICATION DE MESSAGERIE (MODBUS) SUR ETHERNET DESTINEE A DES COMMUNICATIONS DE COUCHE DE TRANSPORT (TCP), PROCEDE ET APPAREIL

Publication  
**EP 1036351 B1 20041110 (EN)**

Application  
**EP 99948359 A 19990917**

Priority  
• US 9921806 W 19990917  
• US 16687098 A 19981006

Abstract (en)  
[origin: WO0025183A1] A communications adapter (10) is provided for interfacing between a master device (12) and an I/O device (14) (body) having an output and/or an input. In the case of the I/O body (14) having an output, the adapter has a TCP port for coupling to the master device via a transmission path for receiving a request message. The adapter (10) also has a connector for operable coupling to the I/O device (14) for receiving the output of the I/O device. The adapter (10) further has an interface circuit operably connected to the TCP port and the connector for transmitting a response message over the transmission path in response to the request message, the response message correlating to the output received from the I/O device. The request message and the response message is limited to a length that is less than a TCP transaction length and/or a maximum transmission unit limit, or both, depending on the embodiment of the present invention.

IPC 1-7  
**G05B 19/05**; **H04L 29/06**

IPC 8 full level  
**G05B 19/05** (2006.01); **G05B 19/418** (2006.01); **H04L 12/28** (2006.01); **H04L 12/413** (2006.01); **H04L 29/06** (2006.01); **H04L 29/10** (2006.01)

CPC (source: EP US)  
**G05B 19/4185** (2013.01 - EP US); **H04L 12/40013** (2013.01 - EP US); **H04L 12/403** (2013.01 - EP US); **H04L 12/413** (2013.01 - EP US); **H04L 69/16** (2013.01 - EP US); **H04L 2012/40215** (2013.01 - EP US); **H04L 2012/40228** (2013.01 - EP US); **Y02P 90/02** (2015.11 - EP US)

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**WO 0025183 A1 20000504**; CA 2312227 A1 20000504; CA 2312227 C 20080122; DE 69921772 D1 20041216; DE 69921772 T2 20051124; EP 1036351 A1 20000920; EP 1036351 B1 20041110; JP 2002528980 A 20020903; US 2001018712 A1 20010830; US 2002065960 A1 20020530; US 2002176441 A1 20021128; US 6233626 B1 20010515; US 6466995 B2 20021015; US 7590702 B2 20090915

DOCDB simple family (application)  
**US 9921806 W 19990917**; CA 2312227 A 19990917; DE 69921772 T 19990917; EP 99948359 A 19990917; JP 2000578703 A 19990917; US 14027302 A 20020507; US 16687098 A 19981006; US 312301 A 20011126; US 80436201 A 20010312